high voluntary enrolment rate in the NRCMS a number of issues have been identified in the survey. Three key remedial actions in health financing, planning and management to counteract the identified issues are proposed: 1) Enacting legislation and setting up a risk fund to ensure sustainability of the NRCMS; 2)The main rights and responsibilities of related parties in the NRCMS should be clarified to improve the incentive mechanism; and 3) Integrate disease prevention and the reform of township hospitals.

DISEASE-SPECIFIC STUDIES

CARDIOVASCULAR DISORDERS - Clinical Outcomes Studies

PCV1

EVALUATION OF STATIN-ASSOCIATED ADVERSE EVENTS: ANALYSIS OF THE INCIDENCE AND INFLUENCE OF THE CONCOMITANT USE OF POTENTIAL INTERACTING DRUGS

Wang MT[1], Chiang PY[2], Lee WJ[3]
[1]National Defense Medical Center, Taipei, Taiwan, [2]Department of Pharmacy Practice, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, [3]School of Pharmacy, National Defense Medical Center, Taipei, Taiwan

OBJECTIVES: To estimate the incidences of hospitalizations for statin-related adverse events (AEs) and further evaluate the influence of the concomitant use of fibrates or cytochrome P450 (CYP) 3A4 inhibitors on the risks of AEs in patients initiating statin treatments. **METHODS:** A retrospective cohort study design was employed with analyses from the Taiwan National Health Insurance Research Database between January 1, 2000 and December 31, 2007. The study cohort comprised patients initially treated with statins, and was followed to observe the occurrence of hospitalizations for statin-associated AEs, including myopathy, renal adverse events, hepatotoxic events and acute pancreatitis. Use of statins was further categorized into three groups to examine the effect of concomitant use of the interacting drugs: statin-fibrate combination, statin-CYP3A4 inhibitor combination, and statin monotherapy. Poisson regressions were used to estimate the individual incidences and incidence rate ratios (IRRs) of hospitalization events for the combined therapies versus statin monotherapy. **RESULTS:** A total of 53,594 statin initiators were identified as the study cohort, with atorvastatin and lovastatin being observed as the most commonly prescribed statins. The proportion of statin initiators concomitantly treated with fibrates and CYP3A4 inhibitors was 7.1% and 14.3%, respectively. Overall, the highest incidence occurred in renal adverse events (36.8/10,000 person-years), followed by hepatotoxic events, acute pancreatitis, and myopathy. A similar ranking order of the incidences was observed across the three groups. Compared to statin monotherapy, combination therapy of statins with the interacting medications increased the risks of overall AEs (statin-fibrate combination: adjusted IRR, 2.01; 95% CI, 1.21-3.32; statin-CYP3A4 inhibitor combination: adjusted IRR, 2.29; 95% CI, 1.73-3.02). **CONCLUSIONS:** Renal toxicity is found to be the most frequently occurring AE during statin treatments. Concomitant use of statins with fibrates or CYP3A4 inhibitors increases the risks of statin-associated AEs, which warrants caution for close monitoring of adverse symptoms when statins are used concurrently with the potential interacting drugs.

PCV2

EVALUATION OF STROKE RISK ASSOCIATED WITH ANTIPSYCHOTIC USE IN PATINETS WITH CARDIOVASCULAR DISEASES

Wang MT[1], Lee MF[2], Lo YW[3]
[1]National Defense Medical Center, Taipei, Taiwan, [2]Department of Pharmacy, Chang Gung Memorial Hospital, Taoyuan County, Taiwan, [3]School of Pharmacy, National Defense Medical Center, Taipei, Taiwan

OBJECTIVES: To evaluate the association between use of antipsychotics and risk of stroke in patients with cardiovascular diseases (CVDs). **METHODS:** This was a retrospective nested case-control study analyzing data from the National Health Insurance Research Database in Taiwan. A cohort of all patients with CVDs initiating an antipsychotic was identified during January 1, 1998 and December 31, 2006. Cases were defined as those with hospitalizations for stroke (ICD9-CM codes 430-438, A-code A29), and the date of stroke admission was referred as the index date. Using the incidence density sampling approach, each case was matched to ten randomly-selected controls on age (± 5 years), sex and cohort entry date (± 365 days). Controls were assigned the same index date as their corresponding case. Use of antipsychotics was measured during a six-month period before the index date and categorized into typical or atypical class. Conditional logistic regressions were used to estimate odds ratios (ORs). **RESULTS:** The study cohort comprised 6773 CVD patients, from which 533 cases and 5057 matched controls were identified. Any use of atypical antipsychotics was associated with an increased risk of stroke when compared with typical antipsychotics (adjusted OR, 1.46; 95 % CI, 1.01-2.10). Additionally, the comparative risk was increased to a greater extent as atypical antipsychotics were prescribed within 90 days before the index date (adjusted OR, 1.94; 95% CI, 1.34-2.83). Further stratified analyses indicated that any use of atypical antipsychotics was associated with a 1.55-fold increased risk of stroke in the elderly population. **CONCLUSIONS:** Use of atypical antipsychotics is associated with an increased risk of stroke relative to typical antipsychotics among patients with CVDs, and the risk is further increased as atypical antipsychotics are prescribed more currently. Clinicians should be aware of the stroke risk while prescribing antipsychotics for patients with underlying CVDs, especially in the elderly.

PCV3

ONE-YEAR OUTCOMES AND PROGNOSTIC FACTORS IN SEVERE SEPSIS AND SEPTIC SHOCK SURVIVORS

Alkhalaf MS[1], Abd.Aziz N[2], Tangiisuran B[3], Arabi Y[4], Hassan Y[5]
[1]School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia, [2]Universiti Teknologi MARA, Bandar Puncak Alam, Selangor, Malaysia, [3]Universiti Sains Malaysia, Mnden, Penang, Malaysia, [4]National Guard Hospital, King Abdul-Aziz Medical City, Riyard, Saudi Arabia, [5]Universiti Teknologi MARA, Puncak Alam, Selangor, Malaysia

OBJECTIVES: To determine the outcome and the prognostic factors among severe sepsis and septic shock (SS&SK) survivors one year after hospital discharge. **METHODS:** This was a retrospective and cross-sectional study of patients (≥18 years) admitted ≥24 hours between April 2007 and March 2010 for the first time to the medical-surgical and trauma intensive care unit (ICU) of a tertiary hospital and discharged from the hospital alive. For patients with more than one ICU admission within the same hospitalization, only first ICU admission was counted. Data obtained from an electronic ICU database, hospital information system and medical records. Additionally, We conducted telephonic interviews to evaluate vital status and performance at one year of hospital discharge using *KARNOFSKY PERFORMANCE STATUS SCALE*. Patients who had cardiac arrest were excluded from the study. **RESULTS:** The overall mortality rate was 35%. One-third (31%) of who were still survive at one year post hospital discharge, suffer from significant ($P<0.05$) impairment of performance status. SS&SK survivors who had CHF had 3.4 times higher risk to die as compared to who did not had CHF. Pre-sepsis performance status and CHF were the independent prognostic factors for poor hospital outcomes on long term post hospital discharge in SS&SK survivors. **CONCLUSIONS:** About one third of patients die by one year, another one-third suffer from significant impairment of performance status. Pre-sepsis performance status and CHF were the independent prognostic factors in SS&SK survivors. This data highlights the need for different strategies for caring of SS&SK survivors.

PCV4

COMPARATIVE EFFECTIVENESS RESEARCH OF FONDAPARINUX AND ENOXAPARIN IN ST-ELEVATED ACUTE CORONARY SYNDROME PATIENTS RECEIVING FIBRINOLYTIC THERAPY: A NETWORK META-ANALYSIS

Romyen C[1], Chaiyakunapruk N[2], Permsuwan U[3]
[1]Center of Pharmaceutical Outcomes Research, Muang, Phitsanulok, Thailand, [2]Center of Pharmaceutical Outcomes Research, Muang, Phitsanulok, Thailand, [3]Chiang Mai University, Chiang Mai, Thailand

OBJECTIVES: Thrombolytic therapy is widely accepted as a standard treatment for patients diagnosed with ST-Elevated Acute Coronary Syndrome (ACS). Enoxaparin has been the most commonly used medicine but its increased risk of bleeding is a major concern. Fondaparinux has been available with a potentially better safety profile, but there still no direct head to head study comparing these two agents. This study aims to determine the comparative efficacy and safety of enoxaparin and fondaparinux for treating ST-Elevated ACS using a network meta-analysis. **METHODS:** We undertook a systematic review to identify studies from computerized databases including Pubmed, Cochrane and Clinical Trial.gov. Inclusion criteria are 1) RCT in STEMI patients receiving fibrinolytic agent, and 2) Using Enoxaparin or Fondaparinux. Efficacy outcome was death or myocardial re-infarction at 30 days, while safety outcome was major bleeding event during in hospital or at 30 days. All studies were extracted independently by 2 reviewers. Heterogeneity was tested using Q-statistics and I^2 test. Indirect comparison based on a network meta-analysis under a random-effects model was used to synthesize the comparison between these 2 products. **RESULTS:** Seven studies were included in this study (6 compared Enoxaparin and UFH and 1 Compared Fondaparinux and UFH). The result of network meta-analysis indicated similar efficacy between fondaparinux and enoxaparin (OR = 1.12 (CI: 0.76-1.65), with the lower risk of major bleeding in the fondaparinux group (OR = 0.40 (CI: 0.17-0.96). There was no heterogeneity revealed from Q-statistics and I^2. **CONCLUSIONS:** Our study indicated that among patients with STEACS receiving fibrinolytic agent, fondaparinux has similar efficacy on death/myocardial infarction but statistically significant lower bleeding event compared with enoxaparin. Fondaparinux seems to have favorable risk/benefit profile compared with Enoxaparin when used in STEMI patients receiving fibrinolytic agents.

PCV5

THE EFFEECTS OF STATINS ON BLOOD PRESURE IN NORMOTENSIVE OR HYPERTENSIVE SUBJECTS-A META-ANALYSIS OF 18 RANDOMIZED CONTROLLED TRIALS INVOLVING 5628 PARTICIPANTS

Banach M[1], Nikfar S[2], Rahimi R[3], Mikhailidis DP[4], Narkiewicz K[5], Rysz J[6], Abdollahi M[7]
[1]Medical University of Lodz, Lodz, Warsaw Area, Poland, [2]Tehran University of Medical Sciences, Tehran, Tehran, Iran, [3]Faculty of Traditional Medicine, and Pharmaceutical Sciences Research Center, Tehran University of Medical Sciences, Tehran, Iran, [4]Royal Free Hospital Campus, University College London (UCL) Medical School, London, UK, [5]Medical University of Gdansk, Gdansk, Poland, [6]Medical University of Lodz, Lodz, Poland, [7]Tehran University of Medical Sciences, Tehran, Iran

OBJECTIVES: Statins are the first-line drug therapy in the treatment of hypercholesterolemia. The beneficial clinicalimpact of statins on the cardiovascular system resultsnot only from their lipid-lowering action but also from their pleiotropic effects. Recently, it has been suggested thatstatins can reduce blood pressure; however the available data are still ambiguousand often conflicting. Therefore we performed the meta-analysis to investigate the potential hypotensive action of statins in patients with or without hypertension. **METHODS:** Data from Scopus, PubMed, Web of Science, and the Cochrane Central Register of Controlled Trials for years 1966 to October 2011 were searched for studies that investigated the effect of statins on blood pressure either in normotensive or hypertensive subjects. **RESULTS:** Finally the meta-analysis included 18 trials - 5628 subjects (4692 normotensive, 936 hypertensive) randomized to receive either statins or placebo.The standardized effect size of mean differences of systolic (DSBP) and diastolic blood pressure (DDBP) in normotensive patients for ten included trials for statins therapy was 0.006 (95%CI: -0.052-0.063; $p=0.84$) and -0.03 (95%CI: -0.09-0.03; $p=0.3$), respec-